



New taxa of *Impatiens* (Balsaminaceae) from Madagascar VII. Two new species of *Impatiens* from Mt. Marojejy, Madagascar

EBERHARD FISCHER¹* & MARIE ELISETTE RAHELIVOLOLONA²

¹ Institut für Integrierte Naturwissenschaften – Biologie, Universität Koblenz-Landau, Universitätsstraße 1, 56070 Koblenz, Germany.

² Parc Botanique et Zoologique de Tsimbazaza, BP 4096 Antananarivo & Université de Mahajanga, République de Madagascar.

*Author for correspondence. E-mail: efischer@uni-koblenz.de

Abstract

Two new species, *Impatiens susan-nathansoniae* and *I. hendrikii*, from Mt. Marojejy, Madagascar, are described. *Impatiens susan-nathansoniae* is related to *I. humblotiana* from eastern central Madagascar, but differs in the shape of the lower sepal with spur, the dorsal petal and the lateral united petals. *Impatiens hendrikii* is related to *I. fuchsoides*, but differs in the straight stem, the larger leaves, the broader lateral sepals, the broader lateral united petals with different shape, and the glabrous lower sepal gradually tapering into a short, saccate, whitish red spur.

Key words: endemism, flora, forest, *Impatiens hendrikii*, *Impatiens susan-nathansoniae*, ornithophily, taxonomy

Introduction

From a taxonomic point of view, *Impatiens* Linnaeus (1753: 937) is amongst the most difficult genera of flowering plants. For Madagascar, 110 species were known, mainly described by Perrier de la Bâthie (1934, 1948) and Humbert (1956) (for a short account of taxonomic history see Fischer & Rahelivololona 2002). During a revision of the Balsaminaceae for the “Flore de Madagascar et des Comores”, many new species were discovered of which several have already been described (Fischer & Rahelivololona 2002, 2004, 2007a, b, 2015 ; Fischer *et al.* 2003).

Based on the presence of a bucciniform lower sepal with spur and a cucullate dorsal petal, numerous *Impatiens* species from Africa, Madagascar and India were artificially assembled into one taxonomic group (Warburg & Reiche 1895). Although its representatives seem to be a closely related and well-circumscribed unit (see Grey-Wilson 1980), molecular data suggest that they evolved in different clades and simply share the ornithophilous syndrome (Yuan *et al.* 2004; Janssens *et al.* 2006). Usually, the flowers are red, orange, yellow or rarely greenish. The first Madagascan species with these characters to be described were *I. humblotiana* Baillon (1881: 286) and *I. catati* Drake (1896: pl. 170a). Until the fundamental paper of Perrier de la Bâthie (1934), only these two species of the group were known from Madagascar. In 1934, Perrier de la Bâthie added *I. amoena* Perrier de la Bâthie (1934: 17), *I. antongiliana* Perrier de la Bâthie (1934: 14), *I. danguyana* Perrier de la Bâthie (1934: 12), *I. eriosperma* Perrier de la Bâthie (1934: 11), *I. fuchsoides* Perrier de la Bâthie (1934: 18) and *I. fulgens* Perrier de la Bâthie (1934: 13). Humbert (1956) described *I. perrieri* Humbert (1956: 113). Since that time, several new species have been collected on Madagascar. It is noteworthy that *I. humblotiana* only occurs in the mid-elevation rainforest of eastern Madagascar, while the specimens from Mt. Marojejy growing at mid-elevation (950–1200 m) belong to a rather uniform, recently described taxon, *I. renae* Fischer & Rahelivololona (2004: 38). Above 1200 m, two further new species have now been collected and these are described in the present contribution. Herbarium acronyms follow Holmgren *et al.* 1990.

Impatiens susan-nathansoniae Eb.Fisch. & Raheliv., *sp. nov.* (Figs. 1, 2)

Impatiens humblotianae affinis sed forma petali dorsalis, forma petalorum lateralium et forma sepali inferioris calcarisque valde differt.